

# CURRICULUM VITAE

## CARLA M. KORETSKY

Dean  
Lee Honors College

Professor  
Department of Geosciences  
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### EDUCATION

- 1998 Ph.D. Earth and Planetary Sciences, Johns Hopkins University, Baltimore, MD  
Dissertation Title: "Surface sites on oxide and silicate minerals: Detection with diffuse reflectance FTIR spectroscopy, predictions from crystal chemistry, and implications for silicate dissolution rates"
- 1995 M.A. Earth and Planetary Sciences, Johns Hopkins University, Baltimore, MD
- 1992 B.A. Earth and Planetary Sciences, Washington University in St. Louis, St. Louis, MO  
Cum Laude  
Minors: Economics and Music Performance
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### PROFESSIONAL EXPERIENCE

- 2013-present *Dean*, Lee Honors College, Western Michigan University
- 2012-present *Editor-in-Chief*, *Chemical Geology*
- 2011-present *Professor*, Geosciences Department, Western Michigan University
- 2011-present *Professor*, Environmental & Sustainability Studies Program, Western Michigan University
- 2012-2013 *Associate Dean*, Lee Honors College, Western Michigan University
- 2009-2012 *Editor-in-Chief*, *Geochemical Transactions*
- 2005-2011 *Associate Professor*, Geosciences Department and Environmental Studies Program, Western Michigan University
- 2001-2005 *Assistant Professor*, Environmental Studies Program, Western Michigan University, Kalamazoo, MI
- 2000-2005 *Assistant Professor*, Department of Geosciences, Western Michigan University
- 1999-2000 *Research Scientist*, School of Earth and Atmospheric Sciences, Georgia Institute of Technology
- 1998-1999 *Postdoctoral Scientist*, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA
- 1997 *Lecturer*, Geography and Geology Department, University of North Carolina, Charlotte, NC
- 1993-1997 *Graduate Research Assistant*, Johns Hopkins University, Baltimore, MD
- 1993 *Research Assistant*, Washington University in St. Louis, St. Louis, MO
- 1990-1992 *Undergraduate Research Assistant*, Washington University in St. Louis

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## AWARDS & RECOGNITION

2014	Geochemical Society Distinguished Service Award
2013	WMU Excellence in Diversity Rising Star Award
2013	WMU College of Arts & Sciences Faculty Achievement in Teaching Award
2012	WMU Department of Geosciences Appreciation Award
2010	Wheeling High School Distinguished Alumni Award
2007	WMU College of Arts & Science Dean's Staff and Faculty Appreciation Award
2007	WMU Geosciences Alumni Association Outstanding Faculty Award
2007	WMU Provost's Emerging Scholar Award
2006	WMU Provost's Award for Excellent Sabbatical Application
2005	Inducted into Phi Kappa Phi, Honors Fraternity
1992	Ernest Ohle, Jr. Award for Academic Excellence (Top Graduating Senior), Earth & Planetary Sciences Department, Washington University in St. Louis
1991	Florence Moog Scholarship for Women in Science, Washington University in St. Louis

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## TEACHING EXPERIENCE

2000-present	Western Michigan University <i>Mineralogy</i> (GEOS 3350) <i>Environmental Systems and Cycles</i> (ENVS 2150) <i>Introduction to Geochemistry</i> (GEOS 5550) <i>Geological Communications</i> (GEOS 4600/6600) <i>Biogeochemistry of Wetlands</i> (GEOS 5010/6100) <i>Wetlands Biogeochemistry G9-12 Teacher Workshop</i> (SCI 5900) <i>Environmental Science G9-12 Teacher Workshop</i> (SCI 5900) <i>Environmental Field Geochemistry</i> (GEOS 5020/ENVS4500) <i>Mineral-Water Interface Geochemistry</i> (GEOS 6100) <i>Rocks and Minerals</i> (GEOS 3010)
1998	Guest Lecturer, Georgia Institute of Technology <i>Introduction to Geochemistry</i> <i>Field Methods</i>
1999	Joint Lecturer, Georgia Institute of Technology <i>Topics in Aqueous Geochemistry: Stochastic Models</i>
1997	Lecturer, University of North Carolina, Charlotte <i>Introduction to Soil Science</i> <i>Mineralogy</i>

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## EXTERNAL GRANTS

2015-17	"The influence of road salt deicers on the chemistry of Michigan lakes", Michigan Department of Environmental Quality (co-PI: Dr. Kathryn Docherty), \$32,262
2015	"Student travel support program for the 2015 V.M. Goldschmidt conference in Prague, Czech Republic, August 16-21, 2015", National Science Foundation, \$20,000
2013-14	"Racial Healing Planning Grant", W.K. Kellogg Foundation, co-PI with Dr. Nicholas Andreadis, WMU Lee Honors College, \$2,021,549

2011	“Student travel support program for the 2011 V.M. Goldschmidt conference in Prague, Czech Republic, August 14-19, 2011”, National Science Foundation, \$40,000
2010-2012	“Development of surface complexation models for Cr(VI) adsorption on soils, sediments, and model mixtures of kaolinite, montmorillonite, $\gamma$ -alumina, hydrous manganese and ferric oxides and goethite”, Department of Energy Subsurface Biogeochemistry Research Program, \$149,358
2008-2011	“Development and evaluation of a problem-based field and laboratory environmental geochemistry course”, National Science Foundation Geosciences Education Program, \$134,000 (PI: Heather Petcovic)
2009-2010	“CAREER: Generation of sediment heterogeneity by macrophytes and macrofauna and consequences for redox chemistry and trace metal speciation”, National Science Foundation, CAREER program, REU extension, \$19980
2008-2009	“CAREER: Generation of sediment heterogeneity by macrophytes and macrofauna and consequences for redox chemistry and trace metal speciation”, National Science Foundation, CAREER program, RET extension, \$18100
2007-2008	“CAREER: Generation of sediment heterogeneity by macrophytes and macrofauna and consequences for redox chemistry and trace metal speciation”, National Science Foundation, CAREER program, REU extension, \$16280
2005-2007	“Acquisition of Inductively Coupled Plasma Optical Emission Spectrometer for Interdisciplinary Geochemical, and Geomicrobiological Education and Research”, National Science Foundation, EAR Instrumentation and Facilities Program, \$89,031, PI (co-PI: Dr. Johnson Haas)
2004-2006	“CAREER: Generation of sediment heterogeneity by macrophytes and macrofauna and consequences for redox chemistry and trace metal speciation”, National Science Foundation, CAREER program, \$471,285
2004-2007	American Chemical Society-Petroleum Research Funding (ACS-PRF) Type G, ‘Trace Metal Speciation Surrounding Macrofaunal Burrows: Implications for enhanced solute transport and organic matter degradation in modern and ancient sedimentary systems.’ \$35,000
2001-2004	Microbially Mediated Reductive Dissolution of Manganese and Iron Oxides in Redox-Stratified Sedimentary Environments: A Mechanism for Seasonal Mobilization of Trace Metal Contaminants?” Western Michigan University Environmental Research Proposal Fund, \$80,000 (co-PI: Dr. Johnson Haas)
2001-2003	Quantitative Chemical Mass Transfer in Coastal Sediments During Early Diagenesis, Phase IV”, Office of Naval Research, 2002-2003, \$170,000 ( <i>Co-PI: \$50,000 to CMK/WMU</i> )
1999-2001	“Quantitative Chemical Mass Transfer in Coastal Sediments During Early Diagenesis: Effects of Biological Transport, Mineralogy, and Fabric”, Office of Naval Research, Geology and Geophysics Program 1999-2001, \$160,000

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## INTERNAL GRANTS

2011-2012	“Impact of road salt on the geochemistry of an urban kettle lake” Western Michigan University Faculty Research and Creative Activities Fund, \$10,000, 2011-2012
2011	“Acquisition of a canoe for student teaching, research and outreach”, WMU College of Arts and Sciences Teaching and Research Award, \$500, 2011

- 2007-2008 “Does invasion of the exotic purple loosestrife (*Lythrum salicaria*) affect sediment redox structure and trace metal speciation?” Western Michigan Faculty Research and Creative Activities Fund. \$10,000, 2007-2008.
- 2001-2002 Western Michigan University Jump Start Initiative: Member of Metals Working Group. Group Award \$54,000, 2001-2002
- 2001-2002 “Effects of Vegetation on Redox Stratification of Marsh Sediments”, Western Michigan University, Faculty Research and Creative Activities Support Fund \$10,000, 2001-2002
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## PEER-REVIEWED ARTICLES

\* = Graduate student advised or co-advised by CMK

\*\* = Undergraduate student advised by CMK

1. Komarek M., Koretsky C.M., Stephen K.J.\*, Alessi D.S. and Chrastny V. (2015) Competitive adsorption of Cd(II), Cr(VI) and Pb(II) onto nano-maghemite: a spectroscopic and modeling approach. *Environmental Science and Technology*, in press.
2. Sibert R.J.\*, Koretsky C.M. and Wyman D.A.\*\* (2015) Cultural meromixis: effects of road salt on the chemical stratification of an urban kettle lake. *Chemical Geology*, **395**, 126-137.
3. Kim, S.Y. and Koretsky C.M. (2013) Effects of road salt deicers on the biogeochemistry of lake sediments. *Biogeochemistry*, 112, 343-358.
4. Koretsky C.M., Petcovic H. and Rowbotham K.\* (2012) Development of an authentic inquiry environmental field geochemistry course. *Journal of Geoscience Education*, **60**, 311-324.
5. Koretsky C.M., MacLeod A.\*\*, Sibert R.\*\* and Snyder C.\*\* (2012) Redox stratification and salinization of three kettle lakes in southwest Michigan, USA. *Water Air and Soil Pollution*, **223**, 1415-1427.
6. Reich T.\*\* and Koretsky C.M. (2011) Cr(VI) adsorption on  $\gamma$ -alumina in the presence and absence of CO<sub>2</sub>: comparison of surface complexation models. *Geochimica et Cosmochimica Acta*, **75**, 7006-7017.
7. Barnes N.A.\*, Kehew A.E, Krishnamurthy R.V. and Koretsky C.M. (2011) Redox evolution in glacial drift aquifers: role of diamicton units in reduction of Fe(III). *Environmental Earth Sciences*, **62**, 1027-1038.
8. Reich T.\*\*, Das S.\*, Koretsky C.M., Lund T.\*\* and Landry C.\*\* (2010) Pb adsorption on mixtures of hydrous ferric oxide, quartz and kaolinite: a test of the component additivity surface complexation model. *Chemical Geology*, 275, 262-271.
9. Schaller M.\*\*, Koretsky C.M., Lund T.\*\* and Landry C.\*\* (2009) Cd adsorption on mixtures of HFO, silica and kaolinite: a test of the component additivity surface complexation model. *Journal of Colloid and Interface Science*, **338**, 302-309.
10. Landry C.J.\*\*, Koretsky C.M., Lund T.J.\*\*, Schaller M.\*\* and Das S.\* (2009) Surface complexation modeling of Co(II) adsorption on mixtures of hydrous ferric oxide, quartz and kaolinite. *Geochimica et Cosmochimica Acta*, **73**, 3723-3737.
11. Lund T.\*\*, Koretsky C.M., Landry C.\*\*, Schaller M.\*\* and Das S.\* (2008) Surface complexation modeling of Cu(II) adsorption on mixtures of hydrous ferric oxide and kaolinite. *Geochemical Transactions*, **9**:9.
12. Koretsky C.M., Beuving L.\*, Cuellar A.\*\*. Haveman M.\*, Shattuck T.\* and Wagner M.\*\* (2008) Influence of *Spartina* and *Juncus* on saltmarsh sediments. I. Pore water geochemistry. *Chemical Geology*, **255**, 87-99.

13. Koretsky C.M., Beuving L.\*, Cuellar A.\*\*, Haveman M.\*, Shattuck T.\* and Wagner M.\*\* (2008) Influence of *Spartina* and *Juncus* on saltmarsh sediments. II. Trace element geochemistry. *Chemical Geology*, **255**, 100-113.
14. Gebrehiwet T.\*, Koretsky C.M. and Krishnamurthy R.V. (2008) Influence of *Spartina* and *Juncus* on saltmarsh sediments. III. Solid phase organic geochemistry. *Chemical Geology*, **255**, 114-119.
15. Koretsky C.M. and Miller D.\*\* (2008) Seasonal influence of the needle rush *Juncus roemarianus* on saltmarsh pore water geochemistry. *Estuaries and Coasts*, **31**, 70-84.
16. Koretsky C.M., Haveman, M.\*, Beuving L.\*, Cuellar A.\*\*, Shattuck T.\* and Wagner M.\*\* (2007) Spatial variation of redox and trace metal geochemistry in a minerotrophic fen. *Biogeochemistry*, **86**, 33-62.
17. Koretsky C.M., Haas J.R., Miller D.\*\* and Ndenga N.\* (2006) Seasonal Variations in Pore Water and Sediment Geochemistry of Littoral Lake Sediments (Asylum Lake, MI USA), *Geochemical Transactions*, **7**:11.
18. Koretsky C.M., Haas, J.R., Ndenga N.\*, and Miller D.\*\* (2006) Seasonal variations in redox stratification and potential influence on trace metal speciation in minerotrophic peat sediments. *Water, Air and Soil Pollution*, **173**, 373-403.
19. Koretsky C.M., Meile C., and Van Cappellen P. (2005) Incorporating ecological and biogeochemical information into irrigation models. **Invited Submission** to: *Macro- and Microorganisms in Marine Sediments. Coastal and Estuarine Studies* **60**, Kostka J., Kristensen E. and Haese R., eds, American Geophysical Union, p. 341-358.
20. Koretsky C.M., Moore C., DiChristina T.J., Van Cappellen P., Meile C., Lowe K.L., Viollier E., and Kostka J.E. (2005) Salt marsh pore water geochemistry does not correlate with microbial community structure. *Estuarine, Coastal & Shelf Science*, **62**, 233-251.
21. Koretsky C.M., Moore C., Lowe K., Meile C., DiChristina T.J., and Van Cappellen P. (2003) Seasonal oscillations of microbial iron and sulfate reduction in saltmarsh sediments (Sapelo Island, GA, USA). *Biogeochemistry* **64**, 179-203.
22. Koretsky C.M., Meile C. and Van Cappellen P. (2002) Quantifying bioirrigation using ecological parameters: a stochastic approach. *Geochemical Transactions (special issue)*, **3**, 17-30
23. Meile C., Koretsky C., and Van Cappellen P. (2001) Quantifying bioirrigation in aquatic sediments: an inverse modeling approach. *Limnology and Oceanography* **46**, 164-177.
24. Koretsky C.M. (2000) The significance of surface complexation reactions in hydrologic systems: a geochemist's perspective. *Journal of Hydrology* **230**, 127-171. **INVITED**
25. Prapaipong P., Shock E.L. and Koretsky C.M. (1999) Metal-organic complexes in geochemical processes: estimation of standard partial molal thermodynamic properties of aqueous complexes between metal cations and dicarboxylate ligands at high temperatures. *Geochimica et Cosmochimica Acta* **63**, 2547-2577.
26. Koretsky C.M., Sverjensky D.A. and Sahai N. (1998) A model of surface site types on oxide and silicate minerals based on crystal chemistry: implications for site types and densities, multi-site adsorption, surface infrared spectroscopy, and dissolution kinetics. *American Journal of Science* **298**, 349-438
27. Koretsky C.M., Sverjensky D.A., Salisbury J.W. and D'Aria D.M. (1997) Detection of surface hydroxyl species on quartz,  $\gamma$ -alumina and feldspars using reflectance infrared spectroscopy. *Geochimica et Cosmochimica Acta* **61**, 2193-2210.
28. Shock E.L. and Koretsky C.M. (1995) Metal-organic complexes in geochemical processes: Estimation of standard partial molal thermodynamic properties of aqueous complexes

- between metal cations and monovalent organic acid ligands at high temperatures and pressures. *Geochimica et Cosmochimica Acta* **59**, 1497-1532.
29. Shock E.L. and Koretsky C.M. (1993) Metal-organic complexes in geochemical processes: Calculation of standard partial molal thermodynamic properties of aqueous acetate complexes at high pressures and temperatures. *Geochimica et Cosmochimica Acta* **57**, 4899-4922.
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### INVITED BOOK REVIEW

1. Koretsky C.M. (2001) Book Review: *Introduction to Ground Water Geochemistry* by Hitchon et al. *Geofluids* **1**, 71.
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### INVITED LECTURES (ACADEMIC)

- 2014 University of Notre Dame  
“Urban Dead Seas: natural and anthropogenic influences on redox-stratification of wetlands and lakes”
- 2012 Tulane University  
“Urban Dead Seas: influence of road salt deicers on urban kettle lakes”
- 2010 Guest Lecturer, CHEM 6380 Surfaces in the Environment, WMU  
“The mineral water interface: a geochemist’s perspective”
- 2008 Washington University in St Louis  
“Influence of macrophytes and macrofauna on saltmarsh geochemistry”
- 2008 Wright State University  
“Macrofaunal and macrophyte influences on redox processes and trace metal speciation in marshes”
- 2007 Andrews University  
“Biogeochemistry of Wetland Sediments”
- 2006 Utrecht University  
“Can we predict adsorption on natural sediments?”
- 2005 Kalamazoo College  
“Biogeochemistry in Saltmarsh Sediments: spatiotemporal pattern formation”
- 2005 Western Michigan University, New Faculty Orientation  
“Seeking Equilibrium in a Kinetic Profession: Balancing Excellence in Research, Education and Service”
- 2005 Western Michigan University, Geology Club  
“Bioirrigation: how macrofauna influence sediment geochemistry and microbiology”
- 2004 Purdue University  
“Competitive Interactions between Iron(III) and Sulfate Reducing Bacteria in Saltmarsh Sediments”
- 2002 University of Idaho  
“Competitive Interactions between Iron(III) and Sulfate Reducing Bacteria in Saltmarsh Sediments”
- 2002 University of Windsor, GLIER  
“Seasonal oscillations in iron- and sulfate-reducing bacteria in a Sapelo Island, GA saltmarsh”
- 2002 University of Notre Dame

- “Seasonal oscillations in iron- and sulfate-reducing bacteria in a Sapelo Island, GA saltmarsh”
- 2001 Indiana University-Purdue University  
“Pore Water Geochemistry, Microbial Community Structure and Bioirrigation at Sapelo Island, GA: Integrating field, laboratory and theoretical methods”
- 2000 Western Michigan University  
“Pore Water Geochemistry, Microbial Community Structure and Bioirrigation at Sapelo Island, GA: Integrating field, laboratory and theoretical methods”
- 2000 University of Virginia, Charlottesville  
“Pore Water Geochemistry, Microbial Community Structure and Bioirrigation at Sapelo Island, GA: Integrating field, laboratory and theoretical methods”
- 2000 University of Wisconsin, Madison  
“Pore Water Geochemistry, Microbial Community Structure and Bioirrigation at Sapelo Island, GA: Integrating field, laboratory and theoretical methods”
- 1999 Georgia Institute of Technology  
“Spatial and Temporal Variations in Bioirrigation at Sapelo Island, GA: Inverse and stochastic modeling approaches”
- 1999 Skidaway Institute of Oceanography  
“Modeling the influence of macrofauna on biogeochemical cycles”
- 1999 Western Michigan University  
“Spatial and Temporal Variations in Bioirrigation at Sapelo Island, GA”
- 1999 University of Georgia, Athens  
“Spatial and Temporal Variations in Bioirrigation at Sapelo Island, GA: Inverse and stochastic modeling approaches”
- 1998 Washington University in St. Louis  
Conference: “Geochemical Perspectives on Environmental Processes: New Theoretical and Analytical Approaches to Sources, Transport, and Bioavailability of Trace Elements”  
“Crystal chemical characterization of silicate surface sites: Implications for predictions of silicate dissolution rates”
- 1998 Brown University  
“Surface Sites on Oxide and Silicate Minerals: Detection with FTIR Spectroscopy, Predictions from Crystal Chemistry, and Implications for Silicate Dissolution Rates”
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## **PUBLIC OUTREACH**

- 2015 Belle Isle Aquarium, Belle Isle, Detroit  
Science Saturday Speaker, “Road Salt Deciers and the Dynamics of Urban Lakes”
- 2011 Bell’s Brewery Open House  
Water Quality Presentation by Environmental Field Geochemistry Students, regarding Asylum Lake, open to the public
- 2011 Presentation for the Kalamazoo Ladies Library Association, “Eutrophication and the Influence of Road Salt on Lakes”
- 2011 Presentation for the WMU Landscape Services and AmeriCor Volunteers, “Eutrophication and the Influence of Road Salt on Lakes”
- 2011 Presentation for the Southwest Michigan Environmental Health Professionals Spring Meeting, “Eutrophication and the Influence of Road Salt on Lakes”
- 2011 Presentation for the Natural Areas Seminar Series, WMU, “Causes and Effects of Pollutants on Our Lakes”

- 2011 Presentation to the Asylum Lake Preservation Council, “Water Quality Concerns at Asylum Lake”
  - 2011 Presentation to the City of Kalamazoo Environmental Concerns Committee, “Salinization of Local Lakes”
  - 2010 Guest Lecturer, Annual Meeting of the Two Rivers Coalition (Lawrence, MI)  
“Eutrophication and Salinization of Michigan Lakes”
  - 2010 Bell’s Brewery Open House  
Water Quality Presentation by Environmental Field Geochemistry Students, regarding Woods Lake, open to the public
  - 2010 Visiting Distinguished Alumni at Wheeling High School  
Visited with and spoke to 10 high school science classes
  - 2010 Oakland Drive Winchell Neighborhood Association  
Woods Lake Water Quality Presentation & Report
  - 2010 Portage Northern High School, Environmental Science & Chemistry  
Woods Lake Water Quality Presentation
  - 2010 Decatur Middle School, 8<sup>th</sup> Grade Earth Science  
Woods Lake Water Quality Presentation
  - 2010 Two Rivers Coalition, Bangor, MI  
Woods Lake Water Quality Presentation
  - 2009 Bell’s Brewery Open House  
Water Quality Presentation by Environmental Field Geochemistry Students, regarding Woods Lake, open to the public
  - 2009 Water Quality Report by Environmental Field Geochemistry Students, regarding Woods Lake given to the Woods Lake Association
  - 2006 Southwest Michigan Botanical Club  
“Wetland Sediment Biogeochemistry: the influence of macrophytes”
  - 2005 Ducks Unlimited Banquet  
“Student Involvement in NSF Funded Research”
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## CONFERENCE ABSTRACTS

\* = Graduate student advised by CMK

\*\* = Undergraduate student advised by CMK

1. Komarek M., Koretsky C.M., Stephen K.J.\*, Alessi D.S. and Chrastny V. (2015) Modeling the adsorption of selected metals onto nano-maghemite. Goldschmidt 2015. Prague, Czech Republic.
2. Komarek M., Koretsky C.M., Stephen K.J.\*, Alessi D.S. and Chrastny V. (2015) Competitive adsorption of Cd(II), Cr(VI) and Pb(II) onto nano-maghemite. ICOTTE2015. Japan.
3. Koretsky C.M., Komarek M., Alessi D.S., Stephen K.J.\* and Troy A.\*\* (2015) Adsorption of Cr(VI), Cd(II) and Pb(II) on Nano-Maghemite and Maghemite-Coated Silica. American Chemical Society National Meeting, Denver, CO, **INVITED**.
4. Koretsky C.M., Sibert R.\*, Wyman D.A.\*, Griffey D.\* and Krishnamurthy R.V. (2014) Cultural meromixis: the influence of road salt deicers on two urban lakes. American Geophysical Union, San Francisco, CA, December, **INVITED**.



5. Griffey D.\* and Koretsky C.M. (2013) Effects of road salt deicers on eutrophication and salinization of three kettle lakes in southwest MI, USA. Geological Society of America, Denver, CO, October.
6. Wyman D.\* and Koretsky C.M. (2013) Salinization of Asylum Lake: effects on turnover and lake geochemistry. Geological Society of America, Denver, CO, October.
7. Koretsky C.M., Gilchrist A.M.\*, MacLeod A.\*, Reich T.J.\*\* and Wyman D.\* (2013) Development of surface complexation models for natural and model mineral assemblages. 12<sup>th</sup> International Conference on the Biogeochemistry of Trace Elements. Athens, GA, June 16-20. **INVITED.**
8. Petcovic H., Koretsky C.M. and Rowbotham K.\* (2012) An authentic research approach to teaching environmental geochemistry. Geological Society of America Abstracts with Programs 44, 446.
9. Koretsky C.M. (2012) Adsorption of metals and oxyanions on mineral assemblages. Goldschmidt Conference, Montreal, Canada, June 24-29. **INVITED.**
10. Wyman D.\*\*, Koretsky C.M. and Barger M.\* (2012) Cr(VI) adsorption on organic rich soil from Kleinstuck Marsh, Kalamazoo, MI. Goldschmidt Conference, Montreal, Canada, June 24-29.
11. Gilchrist A.\* and Koretsky C.M. (2012) Sorption of Cr(VI) on mineral assemblages of goethite with clays and Al-oxides. Goldschmidt Conference, Montreal, Canada, June 24-29.
12. Rowbotham K.\*, Petcovic H. and Koretsky C.M. (2011) Developing undergraduates' conceptual understandings of lake systems: a place-based learning success story. GLSI Place-based Education Conference, East Lansing, MI, November 9-10.
13. Sibert R.J.\*, Koretsky C.M., Snyder C.\*\*, MacLeod A.\*\*, Wyman D.\*\*, Gilchrist A.\* and Barone S.\* (2011) Meromixis in an urban kettle lake: effects of road de-icing salts. Geological Society of America National Meeting, Minneapolis, MN, October.
14. Rowbotham K.\*, Petcovic H. and Koretsky C.M. (2011) Green, stinky and sick: undergraduates' conceptions of eutrophication. Geological Society of America National Meeting, Minneapolis, MN, October.
15. Koretsky C.M. (2011) Urban Dead Seas: natural and anthropogenic influences on redox-stratified lakes and wetlands. Goldschmidt Conference, Prague, Czech Republic, August 14-19. **KEYNOTES**
16. Koretsky C.M. and Reich T.J.\*\* (2011) Cr(VI) adsorption on  $\gamma$ -alumina. Goldschmidt Conference, Prague, Czech Republic, August 14-19.
17. MacLeod A.\* and Koretsky C.M. (2011) Adsorption of Cr(VI) on hydrous manganese oxide. Goldschmidt Conference, Prague, Czech Republic, August 14-19.
18. Barger M.\* and Koretsky C.M. (2011) Influence of citric acid, EDTA and fulvic acid on U(VI) sorption on kaolinite. Goldschmidt Conference, Prague, Czech Republic, August 14-19.
19. Sibert R.\*, Koretsky C.M., Snyder C.\*\*, MacLeod A.\*, and Barone S. (2011) The effects of road salt influx on the geochemical cycling of Woods Lake, Kalamazoo, MI. Goldschmidt Conference, Prague, Czech Republic, August 14-19.
20. Rowbotham K.\*, Petcovic H. and Koretsky C.M. (2011) Student conceptions of eutrophication and biogeochemical cycling in a field-based undergraduate course. *American Society of Limnology and Oceanography Aquatic Sciences Meeting*, San Juan, Puerto Rico.
21. Akafia M.\*, Reich T.J.\*\* and Koretsky C.M. (2011) Assessing Cd, Co, Cu, Ni and Pb sorption on montmorillonite using surface complexation models. 9<sup>th</sup> Symposium on the Geochemistry of the Earth's Surface, Boulder, CO.

22. Barger M.\* and Koretsky C.M. (2011). The Influence of citric acid, EDTA and fulvic acid on U(VI) sorption onto kaolinite. 9<sup>th</sup> Symposium on the Geochemistry of the Earth's Surface, Boulder, CO.
23. MacLeod A.\*\* , Sibert R.\* , Snyder C.\*\* and Koretsky C.M. (2011) Eutrophication and salinization of urban and rural kettle lakes in Kalamazoo and Barry Counties, Michigan, USA. 9<sup>th</sup> Symposium on the Geochemistry of the Earth's Surface, Boulder, CO.
24. Kim S.-Y. and Koretsky C. (2011) Influence of NaCl and CaCl<sub>2</sub> on lake sediment biogeochemistry. 9<sup>th</sup> Symposium on the Geochemistry of the Earth's Surface, Boulder, CO.
25. Kim S.-Y., Kang H. and Koretsky C. (2010) Effects of road salts on pore water geochemistry of wetland sediments. 2010 KWS International Conference on Wetlands. Chang-won, South Korea, 23<sup>rd</sup> November 2010.
26. Snyder C.\*\* , Koretsky C.M., MacLeod A.\*\* and Sibert R.\* (2010) Redox stratification in the water column of eutrophic rural and urban lakes in southwest Michigan, USA. (2010) *Geological Society of America*, Denver, CO.
27. Sibert R.\* , Koretsky C.M., Snyder C.\*\* and MacLeod A.\*\* (2010) Eutrophication and salinization of Woods Lake, Kalamazoo, MI, *Geological Society of America*, Denver, CO.
28. Koretsky C.M., Rowbotham K. and Petcovic H. (2010) Teaching environmental geochemistry: an authentic field and laboratory research approach. *Geological Society of America*, Denver, CO.
29. Barger M.\* and Koretsky C.M. (2010) The influence of citric acid, EDTA and fulvic acid on UO<sub>2</sub> sorption to kaolinite. *Geological Society of America*, Denver, CO.
30. Reich T.\*\* and Koretsky C.M. (2010) Comparison of surface complexation modeling approaches to describe Cr(VI) adsorption on  $\gamma$ -alumina in the presence and absence of CO<sub>2</sub>. *Geological Society of America*, Denver, CO.
31. MacLeod A.\*\* , Koretsky C.M., Sibert R.\* and Snyder C.\*\* (2010) Comparison of salinity in rural and suburban lakes of southwest Michigan, USA. *Geological Society of America*, Denver, CO.
32. Koretsky C.M. (2010) Predicting adsorption in natural systems: are we there yet? *American Geophysical Union Fall Meeting*, San Francisco, CA. **INVITED**
33. Barger M.\* and Koretsky C.M. (2010) Influence of organic acids on U(VI) adsorption onto kaolinite. *Geochimica et Cosmochimica Acta* **77**, Supplement A52.
34. Akafia M.\* and Koretsky C.M. (2010) Sorption of Co, Ni, Cu, Cd and Pb on Na-montmorillonite: a laboratory and modeling study. *Geochimica et Cosmochimica Acta* **77**, Supplement, A7.
35. Donovan P.\*\* and Koretsky C.M. (2010) Kinetics of Cr(VI) adsorption and desorption on montmorillonite and kaolinite *Geochimica et Cosmochimica Acta* **77**, Supplement, A242.
36. Kim S.-Y. and Koretsky C.M. (2010) Effects of road salts on pore water geochemistry of lake sediments. *Geochimica et Cosmochimica Acta* **77**, Supplement, A517.
37. Koretsky C.M., Block K.L. and Petcovic H.L. (2010) Development of a problem-based, service-learning environmental field geochemistry course. *Geochimica et Cosmochimica* **77**, Supplement, A532.
38. Block K.L, Petcovic H.L. and Koretsky C.M. (2009) Investigating student conceptions of environmental systems in a field-based undergraduate course. *Michigan Academy of Science Arts and Letters Conference*.
39. Akafia M.M.\* and Koretsky C.M. (2009) Sorption of Co, Ni, Cu, Cd and Pb on Na-montmorillonite: a laboratory and modeling study. *Geological Society of America Abstracts with Programs* **41(7)**, 308.

40. Cuellar A.A.\*, Sibert R.J.\*\* , Donovan P.M.\*\* and Koretsky C.M. (2009) Development of a selective extraction scheme using cobalt and cadmium doped HFO. *Geological Society of America Abstracts with Programs* **41(7)**, 328.
41. Block K.L, Petcovic H.L. and Koretsky C.M. (2009) Investigating student conceptions of environmental systems in a field-based undergraduate course. *Geological Society of America Abstracts with Programs* **41(7)**, 316.
42. Koretsky C.M., Cuellar A.\*, Gebrehiwet T.\*, Haveman M.\* and Krishnamurthy R.V. (2009) Influence of macrophytes and macrofauna on saltmarsh porewater and sediment geochemistry. *Geochimica et Cosmochimica Supplement*, A683.
43. Reich T.J.\*\* , Koretsky C.M., and Das S.\* (2009) Surface complexation modeling of Pb(II) adsorption on mixtures of hydrous ferric oxide, kaolinite and quartz. *Geochimica et Cosmochimica Supplement*, A1083.
44. Sibert R.J.\*\* , Cuellar A.\*, Donovan P.M.\*\* and Koretsky C.M. (2009) Selective dissolution of Co or Cd-doped hydrous ferric oxide, *Geochimica et Cosmochimica Supplement*, A1219.
45. Schaller M.S.\*\* and Koretsky C.M. (2008) Cadmium adsorption to mixed mineral assemblages of kaolinite, silica and hydrous ferric oxide. Geological Society of America, Houston, TX, October 2008.
46. Koretsky C.M. and Landry C.J.\*\* (2008) Copper and cobalt adsorption on assemblages of kaolinite, silica and hydrous ferric oxide. *American Chemical Society*, New Orleans, LA, April 2008. **INVITED.**
47. Schaller M.\*\* and Koretsky C.M. (2008) Cadmium adsorption on mixed mineral assemblages of kaolinite, silica and hydrous ferric oxide. *American Chemical Society*, New Orleans, LA, April 2008.
48. Whitlock T.\* and Koretsky C.M. (2008) Trace metal contamination in a sand and gravel aquifer (Cascade, Michigan). *American Chemical Society*, New Orleans, LA, April 2008.
49. Haveman M.J.\*, Cuellar A.\*\* and Koretsky C.M. (2007) Influence of purple loosestrife invasion on porewater chemistry in a Michigan peatland. *Geological Society of America*, Denver, CO, October 2007.
50. Koretsky C. (2007) Influence of *Spartina alterniflora* and *Juncus roemarianus* on saltmarsh sediment pore water and solid phase geochemistry. *Geological Society of America*, Denver, CO, October 2007.
51. Cuellar A.A.,\*\* Haveman J.\* and Koretsky C.M. (2007) The seasonal influence of macrophytes on trace metal partitioning in a minerotrophic fen. *Geological Society of America*, Denver, CO, October 2007.
52. Schaller M.\*\* and Koretsky C. (2007) Cadmium adsorption on mixed mineral assemblages of kaolinite and hydrous ferric oxide. *Geological Society of America*, Denver, CO, October 2007.
53. Whitlock T.\* and Koretsky C. (2007) Trace metal partitioning in a sand and gravel aquifer (Cascade, Michigan). *Geological Society of America*, Denver, CO, October 2007.
54. Haveman M.\*, Cuellar A.\*\* and Koretsky C. (2007) Influence of purple loosestrife invasion on porewater chemistry in a Michigan peatland. *10<sup>th</sup> International symposium on wetland biogeochemistry: frontiers in biogeochemistry*. Annapolis, MD, April 2007.
55. Koretsky C.M., Haas J., Miller D.\*\* and Ndenga N.\* (2007) Seasonal variations in pore water and sediment geochemistry of littoral lake sediments. *10<sup>th</sup> International symposium on wetland biogeochemistry: frontiers in biogeochemistry*. Annapolis, MD, April 2007.
56. Gebrehiwet T.A.\*, Koretsky C.M. and Krishnamurthy R.V. (2006) Investigation of vertical redox stratification and stable carbon isotope geochemistry in saltmarsh sediments and pore waters. *American Geophysical Union*, San Francisco, CA, December 2006.

57. Das S.\* and Koretsky C.M. (2006) Adsorption of lead on single phases and binary mixtures of HFO and kaolinite. *Geological Society of America meeting*, Philadelphia, PA, October 2006.
58. Koretsky C.M. (2006) How do seasonal changes in shallow saltmarsh and peatland sediments influence microbial community structure and metal speciation? *American Society of Limnology and Oceanography Aquatic Sciences*, Victoria, BC, June 2006. **INVITED**
59. Shattuck S.\* and Koretsky C.M. (2006) Solid phase iron and trace metal distribution near Pleistocene shrimp burrow walls. *American Chemical Society National Meeting*, Atlanta, GA, March 26-30, 2006.
60. Ndengu S.\* and Koretsky C.M. (2006) Using sequential extraction and adsorption experiments to quantify Ni distribution in a groundwater aquifer. *American Chemical Society National Meeting*, Atlanta, GA, March 26-30, 2006.
61. Lund T.J.\*\* and Koretsky C.M. (2006) Copper adsorption on mixtures of hydrous ferric oxide and kaolinite: a surface complexation approach. *American Chemical Society National Meeting*, Atlanta, GA, March 26-30, 2006.
62. Landry C.J.\*\* and Koretsky C.M. (2006) Co(II) adsorption on HFO and kaolinite: an evaluation of the component additivity surface complexation model. *American Chemical Society National Meeting*, Atlanta, GA, March 26-30, 2006.
63. Shattuck T.\* and Koretsky C.M. (2006) The influence of bioirrigation on trace metal distribution in Pleistocene shrimp burrows. *American Geophysical Union Ocean Sciences Meeting*, Honolulu, HI, February 2006.
64. Das S.\* and Koretsky C.M. Lead adsorption on single phases and binary mixtures of HFO, silica and kaolinite *Geological Society of America*, Salt Lake City, UT, October 16-19, 2005.
65. Lund T.J.\*\* and Koretsky C.M. Copper(II) adsorption on hydrous ferric oxide and kaolinite- a surface complexation approach to modeling adsorption in natural systems. *Geological Society of America*, Salt Lake City, UT, October 16-19, 2005.
66. Ndengu S.\* and Koretsky C.M. Quantifying Ni distribution in a contaminated aquifer using sequential extraction and adsorption experiments *Geological Society of America*, Salt Lake City, UT, October 16-19, 2005.
67. Das S.\* and Koretsky C. (2005) Adsorption of lead on single and mixed mineral assemblages. *15<sup>th</sup> Annual Goldschmidt Conference*, Moscow ID, May 20-25, 2005.
68. Van Cappellen P., Meile C. and Koretsky C. (2005) Irrigation in early diagenetic models: from one-dimensional mass transfer coefficients to multi-dimensional, ecologically-based models. *15<sup>th</sup> Annual Goldschmidt Conference*, May 20-25, Moscow, ID, May 20-25, 2005.
69. Mengistu H.\*, Haas J.R. and Koretsky C. (2005) Improving thermodynamic equilibrium constants of phosphate adsorption onto HFO. *15<sup>th</sup> Annual Goldschmidt Conference*, Moscow ID, May 20-25, 2005.
70. Koretsky C., Meile C. and Van Cappellen C. (2005) Incorporating complementary ecological and biogeochemical information into quantitative bioirrigation models. *15<sup>th</sup> Annual Goldschmidt Conference*, Moscow ID, May 20-25, 2005.
71. Ndengu S.\* and Koretsky C. (2005) Investigating Ni partitioning in a contaminated aquifer. *15<sup>th</sup> Annual Goldschmidt Conference*, Moscow ID, May 20-25, 2005.
72. Koretsky C., Moore C., Meile C. and Van Cappellen P. (2005) Unravelling the effects of macrofauna, macrophytes and microbes on iron and sulfate reduction in saltmarsh sediments. *15<sup>th</sup> Annual Goldschmidt Conference*, Moscow ID, May 20-25, 2005. **Invited Speaker**
73. Koretsky C.M. Incorporating complementary ecological and chemical information into bioirrigation models. *Nereis Park Conference 2004. Bioturbation: the ever-changing seafloor*, November 7-9, 2004, Cary-Le-Rouet, France. **Invited Speaker**

74. Koretsky C.M. and Miller D. (2004) A field and modeling study of macrophyte and macrofaunal effects on saltmarsh sediment pore water and solid phase geochemistry (Sapelo Island, GA, USA). *American Society of Limnology and Oceanography Summer Meeting*, June 13-18, Savannah, GA.
75. Koretsky C., Ndenga, N.\*, Miller D.\*\* and Haas J. (2003) Seasonal variations in trace metal association with iron and manganese (hydr)oxides in the Kalamazoo River Watershed (Kalamazoo, MI, USA). *International Workshop on the Mobility and Bioavailability of Metals in Soils and Groundwater*, Ascona Switzerland, March 2-7, 2003.
76. Koretsky C., Ndenga, N.\*, Miller D.\*\* and Haas J. (2003) Trace metal association with iron and manganese (hydr)oxides in the Kalamazoo River Watershed (Kalamazoo, MI, USA) *ASLO Aquatic Sciences Meeting*, Salt Lake City, UT, February 8-14, 2003.
77. Atekwana E., Atekwana E., Werkema D., Duris J., Rossbach S., Sauck W., Koretsky C., Cassidy D., Means J., Sherrod L. (2003) Investigating the effects of microbial communities on electrical properties of soils: preliminary results from a pilot scale column experiment, *European Geophysical Society, Geophysical Research Abstracts*, **5**, 13832.
78. Koretsky C., Meile C. and Van Cappellen P. (2002) The influence of macrophytes and macrofauna on saltmarsh sediment redox geochemistry (Sapelo Island, GA, USA) *Geological Society of America Annual Meeting*, Denver, CO, October 27-30, 2002.
79. Ndenga, N.\*, Koretsky C., Miller D.\*\* and Haas J. (2002) Seasonal variations in trace metal association with iron and manganese (hydr)oxides in the Kalamazoo River watershed (Kalamazoo, MI, USA). *Geological Society of America Annual Meeting*, Denver, CO, October 27-30, 2002.
80. Koretsky C., Moore C., Meile C., DiChristina T. and Van Cappellen P. (2002) Seasonal oscillations in microbial iron and sulfate reduction in saltmarsh sediments. *Twelfth Annual V.M. Goldschmidt Conference*, Davos, Switzerland, August 18-23, 2002.
81. Meile C., Van Cappellen P. and Koretsky C. (2002) Global estimates of enhanced solute transport in marine sediments. *6th Dutch Earth Science Congress (NAC VI)*, Veldhoven, The Netherlands.
82. Koretsky C., Meile C. and Van Cappellen P. (2002) Effects of macrophytes and macrofauna on saltmarsh pore water redox chemistry (Sapelo Island, GA). *ASLO Ocean Sciences Meeting*, February 5-11, Honolulu, Hawaii.
83. Meile C., Van Cappellen P., Koretsky C. and Regnier P. (2001) Modeling small scale spatial heterogeneity in early diagenesis. *American Chemical Society Meeting*, April, San Diego, CA.
84. Meile C., Koretsky C. and Van Cappellen P. (2001) Quantifying biologically induced solute transport in aquatic sediments: an inverse approach. *American Chemical Society Meeting*, April, San Diego, CA.
85. Meile C., Koretsky C.M., and Van Cappellen P. (2000) Modeling bioirrigation intensity in aquatic sediments *American Geophysical Union*, San Francisco, CA, December.
86. Koretsky C., Moore C., DiChristina T. and Van Cappellen P. (2000) Seasonal oscillations in ferric iron- and sulfate-reducing bacteria in saltmarsh sediments (Sapelo Island, GA). *Geochemistry of Crustal Fluids URESCO Conference*, Granada, Spain, December 4-9, 2000.
87. Koretsky C., DiChristina T., Moore C. and Van Cappellen P. (2000) Seasonal oscillations in microbial and abiotic iron(III) reduction in saltmarsh sediments. *23<sup>rd</sup> Annual Midwest Environmental Chemistry Workshop*, Kalamazoo, MI, October 7-8 2000.
88. Koretsky C.M., Meile C., Curry B., Haas J., Hunter K. and Van Cappellen P. (2000) The effect of colonization by *Spartina alterniflora* on pore water redox geochemistry at a

- saltmarsh on Sapelo Island, GA. *Tenth Annual V.M. Goldschmidt Conference*, Oxford, England, September 3-8, Journal of Conference Abstracts 5, 599.
89. Koretsky C.M., Moore C., Van Cappellen P. and DiChristina T. (2000) Competitive interactions between Fe(III) and sulfate reducing bacteria in saltmarsh sediments. *American Society of Limnology and Oceanography Meeting*, Copenhagen, Denmark, June 5-9, 2000.
  90. DiChristina T., Koretsky C., Meile C., Van Cappellen P. and Kostka J. (2000) Seasonal oscillations in iron and sulfate reducing microbial populations in saltmarsh sediments at Sapelo Island, GA. *American Society of Limnology and Oceanography Meeting*, Copenhagen, Denmark, June 5-9, 2000.
  91. Meile C., Koretsky C. and Van Cappellen P. (2000) Quantifying bioirrigation in aquatic sediments - an inverse approach. *American Society of Limnology and Oceanography Meeting*, Copenhagen, Denmark, June 5-9, 2000.
  92. Koretsky C.M., Van Cappellen P., Lowe K., DiChristina T., and Kostka J. (1999) Spatial and Temporal Trends in Saltmarsh Biogeochemistry. *Fourteenth International Symposium on Environmental Biogeochemistry*, Huntsville, Ontario, September 25-29, 1999
  93. Koretsky C.M. and Van Cappellen P. (1999) Quantitative Modeling of Bioirrigation: A Stochastic Approach. *Chemical Oceanography Gordon Conference*, Kimball Union Academy, August 8-13, 1999.
  94. Koretsky C.M. and Van Cappellen P. (1999) Spatial and temporal trends in saltmarsh sediment geochemistry. *6th Symposium on Biogeochemistry of Wetlands*. July 11-14, 1999. Ft. Lauderdale, Florida.
  95. Koretsky C.M., Van Cappellen P. and Meile C. (1999) A stochastic approach to bioirrigation modeling in sedimentary environments. *5th International Symposium on the Geochemistry of the Earth's Surface*. August 16-20, 1999, Reykjavik, Iceland.
  96. Kostka J., Roychoudhury A., Koretsky C.M. and Van Cappellen P. (1999) Microbial respiration rates in saltmarsh sediments. *6th Symposium on Biogeochemistry of Wetlands*. July 11-14, 1999. Ft. Lauderdale, Florida.
  97. Meile C., Koretsky C. and Van Cappellen P. (1999) Spatial and temporal variations in bioirrigation: An inverse approach. *5th International Symposium on the Geochemistry of the Earth's Surface*. August 16-20, 1999, Reykjavik, Iceland.
  98. Koretsky C.M., Van Cappellen P. and Kostka J. (1998) Seasonal dependence of porewater irrigation in a saltmarsh at Sapelo Island, GA: Implications for sediment biogeochemistry. *Geological Society of America, Abstracts with Programs*, 30, 374.
  99. Walker S.E., Van Cappellen P., Roychoudhury A. and Koretsky C. (1998) Preservation of experimentally-deployed molluscan carbonate below the sediment-water interface. *Geological Society of America, Abstracts with Programs*.
  100. Goldstein S.T., Van Cappellen P., Roychoudhury A. and Koretsky C. (1998) Preservation of salt-marsh foraminifera in experimental arrays deployed below the sediment-water interface, Sapelo Island, Georgia (USA), *Geological Society of America, Abstracts with Programs*.
  101. Koretsky C.M. and Sverjensky D.A. (1997) Predicting silicate dissolution rates using a triple layer surface complexation model. *Geological Society of America, Abstracts with Programs*. **29(6)**.
  102. Koretsky C.M. and Sverjensky D.A. (1997) Structure of surface sites predicted from crystal chemistry: Implications for interpretation of infrared and X-ray absorption fine-structure spectroscopy data. In: *Seventh Annual V.M. Goldschmidt Conference*, p.116, LPI Contribution No. 921, Lunar and Planetary Institute, Houston.

103. Koretsky C.M., Sahai N. and Sverjensky D.A. (1996) Calculation of surface site densities on a variety of oxide and silicate minerals using crystal structures and morphologies. *Geological Society of America, Abstracts with Programs*, **28(7)** A-146.
  104. Koretsky C.M. and Sverjensky D.A. (1995) A comparison of andalusite, kyanite, sillimanite,  $\gamma$ -alumina, quartz and feldspar surface hydroxyl groups using reflectance infrared spectroscopy. *Geological Society of America, Abstracts with Programs*, A-182.
  105. Koretsky C.M. and Sverjensky D.A. (1995) Detection of surface hydroxyl species on quartz and feldspars using reflectance infrared spectroscopy. *American Geophysical Union Spring Meeting*.
  106. Sverjensky D.A., Criscenti L.J., Koretsky C.M. and Sahai N. (1995) A constant capacitance model for dissolution rates for oxides and silicates at 25°C and 1 bar. *American Geophysical Union Spring Meeting*, S101.
  107. Koretsky C.M. and Shock E.L. (1993) Assessing the role of aqueous metal complexes of monovalent organic ligands in geochemical processes. *Geological Society of America, Abstracts with Programs*, A-437.
  108. Koretsky C.M. and Shock E.L. (1993) Acetate complexes as an illustration of metal-organic interactions in groundwater and sedimentary basin brines. *Geological Society of America, North-Central Section, Abstracts with Programs* A-32.
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## SYNERGISTIC ACTIVITIES

- *International Service: Editorial*  
 Editorial Board *Geochemical Transactions*, 2005-2009, 2012-present  
 Review Editor *Frontiers in Microbiology, Extreme Microbiology Section*, 2014-present  
 Editorial Board *Chemical Geology*, 2008-2012  
 Co-Editor of *Geochemical News*, 2001-2008
  
- *International Service: Review Panels*  
 EPA Review Panel, 2015  
 Goldschmidt Travel Fund Committee Chair, 2011-2014  
 DOE WDTs Reverse Site Visit Program Reviewer, 2012  
 NSF Program Panelist, 2012  
 NASA Program Panelist, 2011  
 DOE Program Panelist, 2011  
 DOE Panelist, October 2010  
 College Board Earth Science Standards Reviewer, 2009  
 NSF Program Panelist, 2009  
 DOE Panelist, 2009  
 NSF Program Panelist, 2008  
 DOE Program Panelist, 2008  
 NRL Review Panelist, 2007  
 NSF Program Panelist, 2007  
 NSF Program Panelist, 2006
  
- *International Service: Conference Organization*  
 Theme Session: Trace metals in the environment, Goldschmidt 2011  
 Theme Session: Nontraditional SCMs, Goldschmidt 2010  
 Theme Session: Bioirrigation, Goldschmidt 2005  
 International Steering Committee, Goldschmidt 2005

Water-Rock Interactions Financial Assistance Committee, 2004  
ASLO Aquatic Sciences Meeting Steering Committee, 2003  
ASLO Aquatic Sciences Meeting Abstract Sorting Committee, 2003

- *International Service: Professional Societies*  
Board of the Geochemical Society, 2005-2008  
GS Board Subcommittee on Funding in the Sciences, 2005-2008  
GS Board Website Subcommittee, 2007-2008
- *International Service: Participation in Workshops*  
NSF Earth Science Literacy Initiative Conference, St. Louis, July 2008  
NSF Earth Science Literacy Initiative Online Conference, May 2008  
Invited GEON NSF Cyberinfrastructure Workshop, La Jolla, CA, March 2-4, 2004  
Invited “Conceptual Model Development for Subsurface Reactive Transport Modeling of Inorganic Contaminants, Radionuclides, and Nutrients” Workshop Participant, April 20-22, 2004
- *Manuscript Reviews Completed For:* Adsorption of Metals to Geomedia II (book), American Journal of Science, Aquatic Microbial Ecology, Applied Geochemistry, Biogeochemistry, Biogeosciences Discussion, Canadian Journal of Fisheries and Aquatic Sciences, Chemical Geology, Chemical Engineering Journal, Chemosphere, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Earth and Planetary Science Letters, Environmental Science and Technology, Estuaries & Coasts, Estuarine Coastal and Shelf Science, Geobiology, Geochemical Transactions, Geochimica et Cosmochimica Acta, Geoderma, Industrial & Engineering Chemistry Research, JESPR, Journal of Colloid and Interface Science, Journal of Environmental Management, Journal of the Geological Society, Journal of Hazardous Materials, Journal of Marine Research, Kuwait Journal of Science and Engineering, Limnology and Oceanography, Marine Chemistry, Marine Ecology Progress Series, Nature, Ocean Drilling Program, Physics and Chemistry of Minerals, Powder Technology, Science of the Total Environment, Soil Biology and Biochemistry, Soil Science Society of America Journal, Soil & Sediment Contamination: an International Journal, Book: “Interactions between macro- and micro-organisms in sediments”
- *Proposal Reviews Completed For:* American Chemical Society Petroleum Research Fund, Cooperative Institute for Coastal and Estuarine Environmental Technology Program, National Science Foundation, Department of Energy, NWO (Dutch National Science Foundation) Division of Earth & Life Sciences, Seagrant and Binational Science Foundation, Water Resources Center (University of Minnesota)
- *Primary Supervision of MS and PhD Students (14)*  
Danielle Dupuis, MS Candidate, Expected Date of Graduation, Summer 2017  
Krishna Stephens, PhD Candidate, Expected Date of Graduation, Fall 2017  
Davina Wyman, MS Geosciences, Graduated, Summer 2014  
“Effects of road salt on Asylum Lake geochemistry”  
Ann Gilchrist, MS Geosciences, Graduated Spring 2013  
“Surface complexation modeling of Cr(VI) adsorption on mineral assemblages”



Andrew MacLeod, MS Geosciences, Graduated Spring 2013

“Adsorption of hexavalent chromium onto hydrous manganese oxide”

Ryan Sibert, MS Geosciences, Graduated Summer 2012

“The effects of road salt influx on the geochemical cycling of Woods Lake, Kalamazoo, Michigan”

Michelle Barger, PhD Geosciences, Graduated Fall 2011

“Investigating the influence of organic acids on uraninite solubility and uranyl sorption onto kaolinite”

Angel Cuellar, MS Geosciences, Graduated Summer 2010

“Development of an extraction procedure for Cd- and Co-doped iron oxides and bacteria”

Martin Akafia, MS Geosciences, Graduated Summer 2010

“Trace Metal Adsorption on Montmorillonite: a laboratory and modeling study”

Melanie Haveman, MS Geology, Graduated Fall 2009

“Influence of Vegetation on Porewater Chemistry in a Michigan Peatland”

Terri Shattuck, MS Geology, Graduated Fall 2008

“Influence of Bioirrigation on Trace Metal Distribution”

Soumya Das, PhD Geology, Graduated Fall 2007

“Adsorption of Lead on Single and Mixed Solid Systems”

Noah Ndenga, MS Geology, Graduated Summer 2005

“Seasonal Variability in Trace Metal Speciation and Vertical Redox Stratification of Freshwater Lake and Marsh Sediment in the Kalamazoo River Watershed (MI, USA)”

Suama Ndengu, MS Geology, Graduated Summer 2005

“Investigation of Ni Partitioning in a Contaminated Aquifer”

- *Primary Supervision of Non-Thesis Graduate Students (2)*

Amanda St. Amour, Earth Science MS (Non-thesis), Graduated Summer 2005

“Atmospheric Deposition at Kleinstuck Marsh”

Lauren Beuving, MA Earth Science (Non-thesis), Graduated December 2006

- *Primary Supervision of Undergraduate Honors Theses (6)*

Danielle Dupuis, Undergraduate Honors Thesis, Graduated 2015, “Influence of Road Salt Deciers on Anaerobic Respiration and Metal Speciation in Soils”

Tyler Walter, Undergraduate Honors Thesis, Graduated 2013, “Determination of Trace Metals, Volatile Organic Compounds, and Other Water Standards in WMU Drinking Water”

Amy Troy, Undergraduate Honors Thesis, Graduated 2013, “Co and Cr Adsorption on Maghemite, Quartz, and Maghemite-Quartz Mixtures”

Rebecca Kiekhaefer, Undergraduate Honors Thesis, Graduated 2013, “The Effects of Eutrophication and Salinization on Methane Production in Urban and Rural Lakes”

Melinda Schaller, Undergraduate Honors Thesis at Kalamazoo College, Graduated Spring 2007, “Cadmium Adsorption on Mixed Model Solids”

Peter Voice, Undergraduate Honors Thesis, Graduated Winter, 2001

“Prediction of Metal Adsorption on Natural Sediments Using Model Mineral Mixtures”

- *Primary Supervision & Training of Undergraduate Research Assistants (23)*

Caren Ihle, Doug Miller, Amy Nowakowski, Nancy Morgan, Keith Boneburg, Tracy Lund, Jessa Jackson, Chris Landry, David Eagle, Melinda Schaller, Angel Cuellar, Peter Voice, Ryan Sibert, Laura Pearson, Thomas Reich, Patrick Donovan, Kirk Wagenvelt, Andrew MacLeod, Christine Snyder, Amy Troy, Kirsten Wright, Davina Wyman, Jake Tholen

- *Primary Supervision & Training of Howard Hughes Medical Institute Fellows (2)*  
Nicole Parry, Biju Padmanabhan
- *Primary Supervision & Training of Pierce Cedar Creek Summer Interns (2)*  
Andrew MacLeod, Christine Snyder
- *Primary Supervision & Training of High School Interns (7)*  
Gabe Surprise, Ben Quintel, Kate Knoechel, Dahlia Sultan, Sagar Deshpande, Jessica Song, Steve Breisach
- *High School Teacher Summer NSF RET (2)*  
Keith Lang, Lance Goodlock
- *Middle School Science Fair Project*  
Jake Heasley, Kazoo School
- *Graduate Committee Member (26)*  
Shannon Wong, MA; Nate Bolles, MA; Michelle Bargar, MS; Jason Spanier, MA; Abe Northup, MS; Kayleigh Lim, MS; Nathaniel Barnes, MS; Joy Gryzenia, MS; Ahmed Murad, PhD; Loago Mulwalefhe, PhD; Patrick Meyer, PhD; Haile Mengistu, PhD; Tsigabu Gebrehiwet, PhD; Richard Becker, PhD; Joy Gryzenia, MS; Tova Samuels PhD Chemistry; Katherine Rowbotham, PhD Science Education; Carol Beaver, PhD Biological Sciences, WMU External PhD Examiner for Nicola Grigg, University of Canberra, Australia; Kristen Hempel, PhD Chemistry; Joseph Kreft, PhD Chemistry; Steven Barone, MS Geosciences; Derrick Lingle, MS Geosciences, Cameron Manche, MS Geosciences; Hannah Borton, MS Biological Sciences; Since Baunselle, PhD Chemistry
- *Honors Thesis Committee Member (2)*  
Ashley Derthick; Steven Aiello
- *WMU Committee Service*  
WMU Undergraduate Studies Council Member, 2013-present  
University Center for the Humanities Advisory Board, 2013-present  
WMU Racial Healing Grant Advisory Committee Chair, 2013-2015  
FYE 2100 Project Action Team, 2013  
Experiential Learning Project Action Team, 2013  
Equity, Diversity and Social Sustainability Project Action Team, 2013  
Curriculum and Student Success Project Action Team, 2013  
LHC Curriculum Committee Chair, 2012-2013  
Research Advisory Council, 2012-2014

CAS General Education Committee, 2012  
 Geosciences Mineralogy/Petrology Search Committee, 2012  
 WMU Graduate College Dean Search Committee, 2011-2012  
 WMU Office of Student Conduct Review Committee, 2012  
 Geosciences Productivity Committee, 2008-2012  
 Geosciences PhD Program Advisor, Spring 2006-2012  
 Geosciences MS Program Advisor, Summer 2004-2012  
 Geosciences Graduate Admissions Committee, 2006-2012  
 Academic Integrity Committee, Spring 2001-2012  
 WMU Faculty Research and Creativity Activities Fund Review Committee, 2011-2012  
 WMU American Council on Education Michigan Women's Network Institutional Representative, 2011-2012  
 WMU Women's Caucus Steering Committee, 2010-2012  
 WMU Emerging Scholar Award Committee, 2010-2011  
 WMU Graduate Student Research and Travel Fund Review Committee, 2008-2011  
 College of Arts & Sciences Curriculum Committee, Fall 2006-2011  
 WMU OVPR Research and Dessert Workshop CAREER Panel Presenter, 2011  
 Environmental Studies Suite Renovation Committee, 2009-2010  
 Environmental Studies Gwen Frostic Seminar Series Committee 2008-2009  
 College of Arts & Sciences Women's Caucus Steering Committee, 2005-2006  
 Geosciences Graduate Review Committee Chair, 2005-2006  
 FRACASF Review Committee, 2003-2006  
 FRACASF Revision Subcommittee, 2004-2005  
 Geosciences Assessment Committee Chair, 2003-2005  
 Environmental Studies Curriculum Revision Committee, 2004-2005  
 Geosciences Assessment Committee, 2004  
 Geosciences Curriculum Committee Chair, 2004  
 Geosciences Chair Search Committee, 2003  
 Geosciences Sedimentology Search Committee, 2001-2002

- *Other WMU Service*

Louis Stokes Alliances for Minority Participation Workshop, 2011-2015  
 Science Olympiad, "Water Quality" Event Coordinator, March 2012  
 MiTemp K12 Teacher Workshop, July 2011 & July 2012  
 Associate Chair Geosciences Department, 2006  
 Faculty Advisor for Students for Sustainable Earth, 2005-2006  
 Faculty Advisor for WMU Dressage Club, 2008-present  
 Geochemistry Major Advisor, 2003-2004  
 Creation of new, interdisciplinary Geochemistry Major  
 Creation of new "Introduction to Geochemistry" Course  
 Creation of new "Mineral-Water Interface Geochemistry" Course  
 Coordinated Visiting Scholars and Artists Program Visit for Dr. Everett Shock  
 Designed Geosciences Departmental Graduate Recruitment Brochure  
 Member of "Safe on Campus"  
 Medallion Scholarship Competition Faculty Observer, 2003, 2005, 2008-2011  
 Bronco Days Faculty Participant, 2004  
 University 101 Guest Panelist, 2004-2005

- *Community Service*  
Kal-Haven Run Volunteer, 2012, 2013  
Richland Horse Trials Volunteer, 2007-2012, 2014  
Grand Rapid Marathon Volunteer, 2008  
Cheff Center Ride-a-Thon Volunteer, 2008